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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,986	08/28/2003	Shigenori Tomonaga	16869S-092800US	2985

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EXAMINER

SIDDIQI, MOHAMMAD A

ART UNIT	PAPER NUMBER
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2154

MAIL DATE	DELIVERY MODE
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05/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/652,986

Applicant(s)

TOMONAGA ET AL.

Examiner

Mohammad A. Siddiqi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/14/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-5, 7-9, and 11 -15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 7-9, and 11 -15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1, 3-5, 7-9, and 11-15 are presented for examination. Claims 2, 6, and 10 have been cancelled.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/14/2007 has been entered.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 5, and 9 recites the limitation " **the communication cable is connected**". There is insufficient antecedent basis for this limitation in the specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1, 3-5, 7-9, and 11-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Yanai et al. (6,502,205) (hereinafter Yanai).

6. As per claim 1, Yanai discloses a computer-readable storage medium having a program for use in a host computer (212, fig 4) having a function of displaying at a user interface a plurality of management information items expressing access status (user interface provides configuring and monitoring capabilities, col 12, lines 56-67 and col 13, lines 1-6) of a communication

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path for sending a data input/output request from said host computer (212, fig 4) to a storage device and returning result of the access request to said host computer, said storage device (20, 48, fig 1) having a plurality of disk drives (22a, 22b, fig 1) storing data sent from said host computer (212, fig 4) and a disk controller (16, 44, fig 1) controlling to store data sent from said host computer to at least one logical volume corresponding to the plurality of disk drives, said communication path (40, fig 1) providing communication between a host port of said information processing device (elements of fig 1), a disk controller port of said disk controller, a communication cable connecting between said host port and said disk controller port, and a logical volume of said storage device (user interface provides configuring and monitoring capabilities, col 8, lines 18-23; col 12, lines 56-67; col 13, lines 1-6), said program comprising:

code configured to operate a data processor in the host computer to update at least one of said management information items being displayed to express present access status of said communication path when detecting that access failure occurs (col 15, lines 42-54) at said communication path based on an access to said storage device (status access, col 8, lines 18-23; col 12, lines 56-67; col 13, lines 1-6), and/or updating at least one of said management information items being displayed when receiving from said user interface an input for updating said management information items

being displayed (configuring and monitoring, col 8, lines 18-23; col 12, lines 56-67; col 13, lines 1-6),

code configured to operate the data processor to display information between a communication path ID of said communication path (col 8, lines 18-23; col 12, lines 56-67; col 13, lines 1-6; col 47, lines 1-6), a disk controller port ID of said disk controller port, a logical volume ID of said logical volume of said storage device, and state of said communication path indicating off-line or on-line (col 8, lines 18-23; col 12, lines 56-67; col 13, lines 1-6; col 47-48, see the parameters for displaying purpose); and

code configured to operate the data processor to change the display contents concerned with the state of said communication path from said on-line state into said off-line state (col 32, lines 13-16; col 47-48) in which failure has occurred among displayed plurality of communication paths based on receiving failure information from said storage device (col 32, lines 1-16), while a failure has occurred in any one of said displayed plurality of communication paths (col 8, lines 18-23; col 12, lines 56-67; col 13, lines 1-6; col 32, lines 1-16; col 47-48, see the parameters for displaying purpose), wherein said communication path comprises the host port, and the disk controller port of the disk controller to which the communication cable is connected (SQ Link command, 24, fig 1, col 7, lines 50-67, col 47-48).

7. As per claim 3, Yanai discloses in accordance with an input for updating said management information items being displayed, all of said management information items being displayed or part of said management information items being displayed is updated to express present access status of a communication path (status access, col 8, lines 18-23; col 12, lines 56-67; col 13, lines 1-6).

8. As per claim 4, Yanai discloses part of said management information items to be updated includes at least one of an execution number of data input/output as performed between said storage device and said host computer and a number indicative of access failure occurred at said communication path in proper execution of said data input/output (status access, col 8, lines 18-23; col 47-52, messaging examples).

9. As per claim 5, the claim is rejected for the same reasons as claim 1, above.

10. As per claim 7, the claim is rejected for the same reasons as claims 5 and 3, above.

11. As per claim 8, the claim is rejected for the same reasons as claims 5 and 4, above.

12. As per claim 9, the claim is rejected for the same reasons as claim 1, above.

13. As per claim 11, the claim is rejected for the same reasons as claims 9 and 3, above.

14. As per claim 12, the claim is rejected for the same reasons as claims 9 and 4, above.

15. As per claims 13, 14 and 15, wherein the state of said communication path is changed in real time based on receiving failure information from said storage device (dynamic sparing option, col 28, lines 40-61).

Response to Arguments

16. Applicant's arguments filed 03/14/2007 have been fully considered but they are not persuasive, therefore rejections to claims 1, 3-5, 7-9, and 11 - 15 is maintained.

17. In the remarks applicants argued that:

Argument: Yanai does not disclose processor to change the display contents concerned with the state of said communication path from said on-line state into said off-line state in which failure has occurred among displayed plurality of communication paths based on receiving failure information from said storage device.

Response: Yanai discloses processor to change the display contents concerned with the state of said communication path from said on-line state into said off-line state (col 32, lines 13-16; col 47-48, "The SQ LINK command displays the port connection and online/offline status of individual link adapters.") in which failure has occurred among displayed plurality of communication paths based on receiving failure information from said storage device (col 32, lines 1-16).

Argument: Yanai does not disclose communication path comprises the host port, and the disk controller port of the disk controller to which the communication cable is connected.

Response: Yanai discloses communication path comprises the host port, and the disk controller port of the disk controller to which the communication cable is connected (24, fig 1, col 7, lines 50-67, col 47-48,

the #SQ LINK command to determine whether the links are online or offline, and the physical connection status of the links).

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent 5,973,690 teaches monitor, managing and displaying the status of the storage devices.

U.S. Patent 6,954,934

U.S. Pub. 2003/0050118

U.S. Patent 5,301,350

U.S. Patent 6,195,351

U.S. Patent 5,878,201

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad A. Siddiqi whose telephone number is (571) 272-3976. The examiner can normally be reached on Monday -Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (571) 272-1915.

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The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


NATHAN FLYNN
SUPERVISORY PATENT EXAMINER

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAS